

REMARKS

By the present amendment and response, independent claims 2 and 11 have been amended to overcome the Examiner's objections. Claims 2-19 are pending in the present application. Reconsideration and allowance of pending claims 2-19 in view of the following remarks are requested.

The Examiner has stated that no terminal disclaimer has been received for Application No. 09/927,133 as requested in the Office Action dated October 16, 2002. Applicant respectfully submits that a terminal disclaimer for Application No. 09/927,133 was filed on January 24, 2003 with Applicant's response to the Office Action dated October 16, 2002. A copy of the previously filed terminal disclaimer directed to Application No. 09/927,133 and its filed accompanying transmittal form, and a copy of the check that was submitted with the terminal disclaimer are enclosed as Exhibit A.

The Examiner has rejected claims 2-19 under 35 USC §103(a) as being unpatentable over U.S. patent number 6,306,777 to Ogle, Jr. et al. ("Ogle") and U.S. patent number 6,074,917 to Chang et al. ("Chang"). Applicant respectfully submits that the present invention, as defined by amended independent claims 2 and 11, is patentably distinguishable over Ogle and Chang. In any event, Applicant can disqualify, and does disqualify Ogle under 35 U.S.C. §103(c).

Under 35 U.S.C. §103(c), "subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter

and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person" (emphasis added).

In the present application, Ogle is cited under 35 U.S.C. §103 based on purported 35 U.S.C. §102(e) art.

The present application, i.e. U.S. Application Serial No. 09/927,134 filed on August 10, 2001, and Ogle were, at the time the invention of the present application was made, owned by Advanced Micro Devices, Inc. To evidence ownership of the present application, i.e. U.S. Application Serial No. 09/927,134, a copy of the Assignment documents recorded in the present application is enclosed as Exhibit B. With respect to the Ogle patent, i.e. U.S. patent number 6,306,777, its ownership is indicated on the face of the patent, i.e. it is indicated that the Ogle patent is assigned to Advanced Micro Devices, Inc. For the above reasons, Applicant respectfully submits that Ogle is disqualified as prior art under the provisions of 35 U.S.C. §103(c).

Moreover, the present invention is patentably distinguishable over Chang for the following reasons. The present invention, as defined by amended independent claims 2 and 11, teaches, among other things, annealing the ONO stack after the second silicon dioxide layer has been formed, where the annealing is performed in a batch furnace at temperature range to 800 to 1150° C for 300 seconds to 1800 seconds (amended independent claim 2) or in a single wafer Rapid Thermal Annealing tool at a temperature range of 700 to 1100° C for one second to 120 seconds (amended independent claim 11). As disclosed in the present application, by performing an annealing process after

formation of the second silicon dioxide layer and the ONO stack, the present invention advantageously reduces the processing time for forming the second silicon dioxide layer, reduces the thickness of the second silicon dioxide layer, and minimizes change to the silicon nitride layer, which improves overall reliability of the ONO stack.

In contrast to the present invention as defined by amended independent claims 2 and 11, Chang does not teach, disclose, or suggest annealing the ONO stack after the second silicon dioxide layer has been formed, where the annealing is performed in a batch furnace at temperature range to 800 to 1150° C for 300 seconds to 1800 seconds (amended independent claim 2) or in a single wafer Rapid Thermal Annealing tool at a temperature range of 700 to 1100° C for one second to 120 seconds (amended independent claim 11). Chang specifically discloses forming the top oxide layer of an ONO dielectric layer in a two step process, which includes a first step comprising depositing an oxide by low pressure chemical vapor deposition (LPCVD) followed by a second step comprising performing a rapid thermal anneal (RTA). See, for example, Chang, column 4, lines 29-35. However, Chang fails to teach, disclose, or suggest annealing an ONO stack after the second silicon dioxide layer has been formed.

Additionally, Chang specifically discloses conducting an RTA for a time from about 40 seconds to about 80 seconds, or, in a preferred embodiment, for a time from about 50 seconds to about 70 seconds. See, for example, Chang, column 5, lines 20-23. However, Chang fails to teach, disclose, or suggest performing an RTA for a time from one second to 120 seconds, which is a much greater temperature range as required in

amended independent claim 11. Moreover, regarding amended independent claim 2, Chang fails to teach, disclose, or suggest performing an anneal in a batch furnace at a temperature range of 800 to 1150° C for 300 seconds to 1800 seconds.

For the foregoing reasons, Applicant respectfully submits that the present invention, as defined by amended independent claims 2 and 11, is not suggested, disclosed, or taught by Chang. As such, the present invention, as defined by amended independent claims 2 and 11, is patentably distinguishable over Chang. Thus claims 3-10 depending from amended independent claim 2 and claims 12-19 depending from amended independent claim 11 are, *a fortiori*, also patentably distinguishable over Chang for at least the reasons presented above and also for additional limitations contained in each dependent claim.

Based on the foregoing reasons, the present invention, as defined by amended independent claims 2 and 11 and claims depending therefrom, is patentably distinguishable over the art cited by the Examiner. Thus, claims 2-19 pending in the present application are patentably distinguishable over the art cited by the Examiner. As such, and for all the foregoing reasons, an early allowance of claims 2-19 pending in the present application is respectfully requested.

Respectfully Submitted,
FARJAMI & FARJAMI LLP

Date: 8/7/03


Michael Farjami, Esq.
Reg. No. 38, 135

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/927,134		
	Filing Date	Aug 10, 2001	
	First Named Inventor	Ogle, Jr., Robert Bertram	
	Group Art Unit	2814	
	Examiner Name	Weiss, Howard	
Total Number of Pages in This Submission	2	Attorney Docket Number	0180127

ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address <input checked="" type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below): 1. Check for \$110.00
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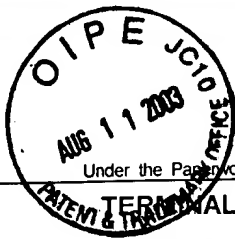
Firm or Individual name	Michael Farjami, Esq., Reg. No. 38,135 Farjami & Farjami LLP
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**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING
REJECTION OVER A PENDING SECOND APPLICATION**

Docket Number (Optional)

0180127

In re Application of: **Ogle, Jr., et al.**

Application No.: **09/927,134**

Filed: **August 10, 2001**

For: **Process For Treating ONO Dielectric Film Of A Floating Gate Memory Cell**

The owner*, Advanced Micro Devices, Inc., of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 to 156 and 173 as shortened by any terminal disclaimer filed prior to the grant of any patent granted on pending Second Application Number 09/927,133, filed on August 10, 2001, of any patent on the pending second application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the second application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

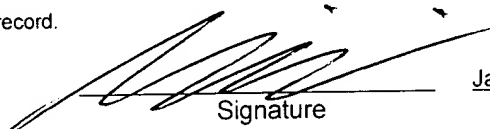
In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 to 156 and 173 of any patent granted on the second application, as shortened by any terminal disclaimer filed prior to the patent grant, in the event that any such granted patent: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☒ The undersigned is an attorney or agent of record.


Signature

January 24, 2003
Date

Michael Farjami, Esq., Reg. No. 38,135
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- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

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BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
OGLE, JR., ROBERT BERTRAM

DOC DATE: 10/17/2001

ASSIGNOR:
HALLIYAL, ARVIND

DOC DATE: 10/18/2001

ASSIGNEE:
ADVANCED MICRO DEVICES, INC.
ONE AMD PLACE
SUNNYVALE, CALIFORNIA 94088-3453

SERIAL NUMBER: 09927134
PATENT NUMBER:

FILING DATE: 08/10/2001
ISSUE DATE:

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2. Name and address of receiving party(ies):

Name: **ADVANCED MICRO DEVICES, INC.**

Street Address: One AMD Place

City: Sunnyvale

CA

94088-3453

Country: U.S.A.

3. Nature of Conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: (a) October 17, 2001; (b) October 18, 2001

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4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s) - 09/927,134

B. Patent No.(s)

Title: PROCESS FOR TREATING ONO DIELECTRIC FILM
OF A FLOATING GATE MEMORY CELL

Additional numbers attached?

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5. Name and address of party to whom correspondence concerning document should be mailed:

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Internal Address: SKJERVEN MORRILL MacPHERSON LLP

Street Address: 25 METRO DRIVE, SUITE 700

City SAN JOSE State CA Zip 95110

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7. Total fee (37 CFR 3.41): \$40.00



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For good and valuable consideration, receipt of which is hereby acknowledged, we

Robert Bertran Ogle, Jr. of		5947 Hosta Lane; San Jose, CA 95124
Arvind Halliyal of		20679 Shelly Drive; Cupertino, CA 95014

hereby sell, assign and transfer to Advanced Micro Devices, Inc., a Delaware corporation, having a place of business at One AMD Place; Sunnyvale, CA 94088, its successors and assigns, the entire right, title and interest throughout the world in our invention in:

Process for Treating ONO Dielectric Film of a Floating Gate Memory Cell

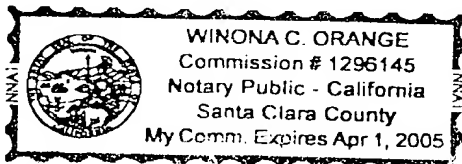
for which we have executed a United States patent application on or about the date of this assignment, and all patent applications and patents of every country for said invention, including divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said applications; we authorize the above-named assignee to apply for patents of foreign countries for said invention, and to claim all rights of priority without further authorization from us; we agree to execute all papers useful in connection with said United States and foreign applications, and generally to do everything possible to aid said assignee, their successors, assigns and nominees, at their request and expense, in obtaining and enforcing patents for said invention in all countries; and we request that the United States Patent and Trademark Office issue all patents granted for said invention to the above-named assignee, its successors and assigns.

Executed this 17th day of October, 2001.

Robert Bertran Ogle, Jr.
Robert Bertran Ogle, Jr.

State of California)
County of Santa Clara) ss.
Clara)

On 10/17/01 before me, WINONA C. ORANGE, Notary Public
personally appeared Robert Bertran Ogle, Jr. personally known to me or proved to me on the
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within instrument and acknowledged to me that he/she/they executed the same in (his/her/their)
authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s),
or the entity upon behalf of which the person(s) acted, executed the instrument.



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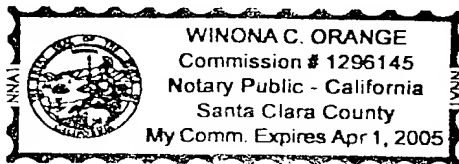
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Arvind Halliyal
Arvind Halliyal

State of California)
 Santa) ss.
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